ABSTRACT

A control device for a legged mobile robot, in which a correction manipulated variable of a desired floor reaction force (desired floor reaction force's moment) is subsequently determined based on an error between an actual state quantity, such as a body posture angle, of the robot 1 and a desired state quantity of the same, and at the same time, a desired movement of the robot 1 is subsequently determined by the use of the correction manipulated variable and a dynamic model. At this time, a friction force component, which defines a frictional force between the robot 1 and a floor such as a translation floor reaction force's horizontal component, is set as a variable to be limited, and an allowable range of the variable to be limited is set. The desired movement is determined so that the variable to be limited remains within the allowable range and a resultant force of an inertial force and gravity, generated by the movement of the robot 1 on the dynamic model, balances with a floor reaction force obtained by correcting the desired floor reaction force by the correction manipulated variable. The desired movement is determined by adjusting a plurality of movement modes having mutually different generation ratios of a floor reaction force's moment and a translation floor reaction force.